April 21, 1981
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Implement & Tractor

FARM TRACTORS:

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2. Makes, models on the 1981 market page 16

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U.S. farm equipment going to Cuba? page 5

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Implement&Tractor

The Business Magazine of the Farm and Industrial Equipment Industry

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8: **Two International Shows.** I&T visits the California Farm Equipment Show at Tulare and CONEXPO '81, the International Construction Equipment Exposition at Houston, Tex.

14: **Where the Horsepower Went in 1980.** There were some subtle but interesting shifts in retail sales of tractors in 1980, compared with 1979...and some happy news.

16: **Makes and Models of Farm Tractors on the 1981 North American Market.**

20: **Dealership Management.** Capital use, new buildings, satellites, parts margins, and people productivity are topics of a conversation with consultant Ed Walsh, part 2.

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what's ahead...

I&T SINCE 1886

April 21, 1981

FEBRUARY RETAIL SALES of farm equipment in the U.S., as presented in the flash report of the Farm & Industrial Equipment Institute, were a mixed bag, with more downs than ups. Sales of four-wheel-drive tractors and self-propelled combines were up moderately and baler sales were strongly higher. Two-wheel-drive tractors, particularly the larger sizes, were still slumped. FIEI always warns that month-to-month comparisons of retail data are to be made with great caution because of the seasonal nature of the business. The flash report:

Unit Retail Sales

	February			January-February		
	1981	1980	Pct. Change	1981	1980	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
40-100 hp	3,055	3,328	- 8.3	7,000	7,914	-11.6
Over 100 hp	2,454	3,700	-33.7	5,633	8,297	-32.2
Total 2-wheel drive	5,509	7,028	-21.7	12,633	16,211	-22.1
4-wheel drive	610	585	+ 4.2	1,440	1,492	- 3.5
Total Tractors	6,119	7,613	-19.7	14,073	17,703	-20.6
Combines (S-P)	1,016	980	+ 3.6	2,691	2,433	+10.6
Balers*	416	323	+28.7	848	756	+12.1
Forage Harvesters**	173	275	-37.1	447	634	-29.5
Mower-Conditioners	530	564	- 6.1	1,164	1,222	- 4.8

*Bales under 200 lbs. **Shear-bar type.

DIESEL FUEL CONSUMPTION/ECONOMY DATA take on new significance with each rise in diesel prices. According to the USDA Economics and Statistics Service, the average price farmers paid per gallon of diesel was $1.13 in February, up 7 cents from the previous month and up 17.8 cents from February, 1980. Best diesel buys for farmers were on the West Coast (California, $1.03 per gallon; Washington, $1.06; Oregon, $1.08). Worst price averages were $1.33 in New York and $1.32 in South Carolina. The average price in Illinois and Indiana, $1.22; in Iowa, $1.15; Wisconsin, $1.19; Ohio, $1.20; Texas, $1.18.

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RETAIL SALES OF SELECTED FARM EQUIPMENT – Jan.-Dec., 1979 and 1980 (1)
(In Units)

	Combines Self-Propelled		Corn Heads		Hay Balers (2)		Windrowers Self-Propelled — Power Units		Windrowers Self-Propelled — Total Heads		Grinder-Mixers		Shear-Bar Forage Harvesters (3)	
	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
Alabama	504	245	107	66	252	153	1	2	1	1	231	135	63	37
Alaska	6	5	.....	.....	9	19	.....	3	.....	4	.....	1	.....	.....
Arizona	35	60	5	7	43	44	63	64	69	76	4	8	16	11
Arkansas	1,123	672	11	5	427	186	2	.....	1	.....	62	82	28	11
California	237	284	65	53	244	174	300	281	327	311	15	5	80	74
Colorado	316	341	166	158	507	437	284	222	289	237	70	68	195	102
Connecticut	2	.....	1	.....	67	58	.....	.....	.....	.....	2	1	68	42
Delaware	55	43	37	44	18	15	.....	1	.....	1	12	8	15	12
Florida	148	78	76	51	113	77	3	.....	3	.....	64	46	26	26
Georgia	764	384	532	302	244	197	1	1	1	1	542	265	133	105
Hawaii	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Idaho	371	440	12	22	505	600	357	404	369	413	48	66	74	75
Illinois	3,305	2,708	3,533	2,821	399	327	15	23	15	23	679	496	365	261
Indiana	1,964	1,489	2,095	1,615	422	316	12	8	12	8	605	390	263	191
Iowa	3,474	2,928	4,191	3,108	459	328	262	137	257	145	2,062	1,290	930	565
Kansas	1,851	1,888	425	343	495	312	411	290	421	300	363	252	348	263
Kentucky	579	363	412	284	455	292	3	3	4	3	345	306	235	182
Louisiana	650	447	2	3	164	68	.....	.....	.....	.....	17	21	26	19
Maine	2	7	.....	.....	89	70	3	2	3	2	1	1	63	46
Maryland	161	149	171	171	137	118	8	13	7	14	51	39	123	77
Massachusetts	.....	.....	.....	.....	59	50	1	6	.....	6	1	3	38	39
Michigan	609	596	592	566	483	382	81	64	85	65	273	263	527	420
Minnesota	2,085	1,652	2,004	1,481	971	735	781	648	804	666	918	629	1,199	873
Mississippi	891	543	10	6	209	79	.....	2	.....	2	70	48	76	62
Missouri	1,676	1,043	939	501	685	436	87	86	89	94	667	509	217	191
Montana	393	414	5	7	413	388	511	443	551	491	87	76	48	37
Nebraska	1,845	1,517	1,816	1,416	257	211	518	307	525	321	633	504	486	359
Nevada	4	3	.....	.....	59	40	76	59	77	63	2	2	6	8
New Hampshire	.....	.....	.....	.....	59	58	1	.....	1	.....	2	.....	39	34
New Jersey	48	26	17	21	65	41	.....	1	.....	1	14	11	32	17
New Mexico	32	42	12	16	168	126	99	63	99	67	18	12	11	9
New York	179	191	287	243	812	769	74	69	74	70	133	120	1,054	853
North Carolina	662	419	530	400	327	303	3	2	3	2	257	162	141	96
North Dakota	1,383	1,014	86	58	96	58	922	588	986	639	194	146	155	144
Ohio	1,654	1,213	1,582	1,132	709	528	14	9	14	9	538	406	391	269
Oklahoma	620	642	15	23	907	407	168	104	172	111	187	131	61	38
Oregon	220	243	13	10	335	413	260	281	265	301	37	33	87	49
Pennsylvania	283	198	305	291	977	751	89	55	90	57	350	321	789	539
Rhode Island	.....	.....	.....	.....	6	7	.....	7	.....	6	1	.....	1	1
South Carolina	384	221	194	131	102	85	.....	.....	.....	.....	127	66	38	37
South Dakota	725	513	540	302	183	98	784	538	842	580	429	332	485	395
Tennessee	692	381	223	156	610	389	1	1	1	1	289	207	229	145
Texas	966	974	278	303	1,445	762	119	86	132	91	270	250	86	85
Utah	41	40	15	10	329	339	156	131	158	144	78	33	97	99
Vermont	.....	1	.....	1	132	110	1	4	1	4	3	.....	177	159
Virginia	259	125	221	127	488	393	7	7	7	7	165	97	259	202
Washington	381	460	71	39	348	432	213	195	226	198	20	21	104	146
West Virginia	3	5	6	7	265	166	.....	1	.....	1	36	28	58	31
Wisconsin	611	675	755	832	1,988	1,481	397	394	401	403	661	542	2,457	1,978
Wyoming	52	59	16	14	214	192	203	197	212	213	33	27	52	45
U.S. Government	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous (4)	.....	.....	1	7	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
TOTAL	32,246	25,741	22,374	17,154	18,750	14,022	7,291	5,802	7,594	6,152	11,673	8,468	12,451	9,461

Data released Feb. 18, 1981, Farm & Industrial Equipment Institute.

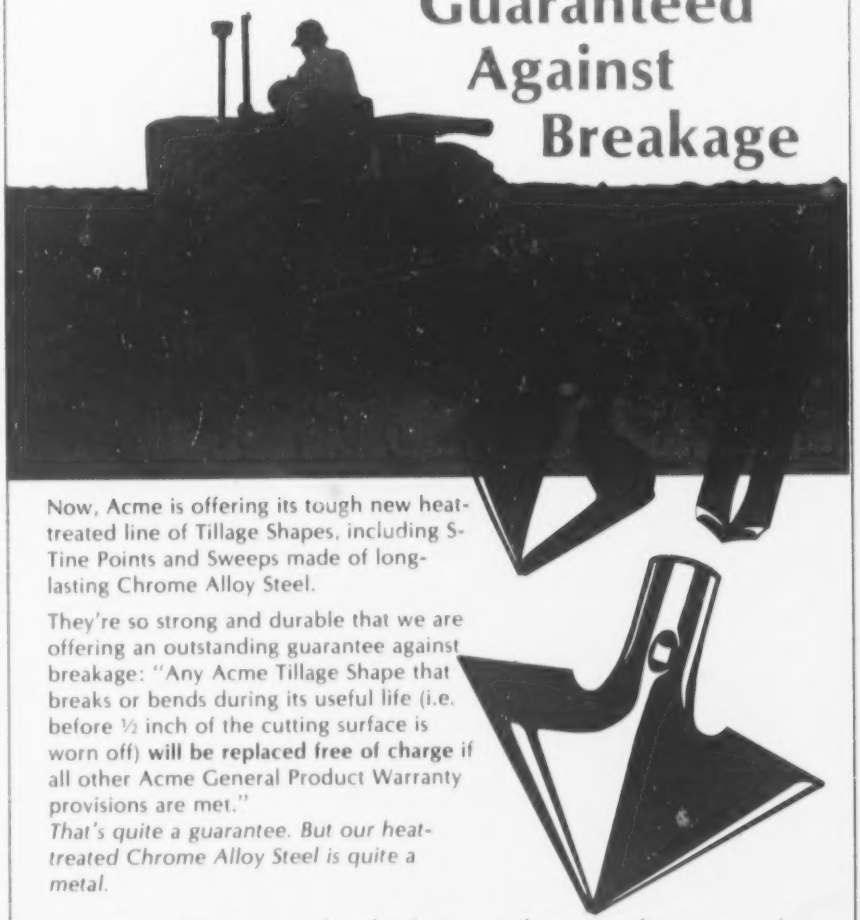
(1) Includes revisions for prior months.
(2) For making bales of under 200 lbs.
(3) Pull-type, mounted, self-propelled.
(4) Sales reported as miscellaneous are retail sales which cannot be classified by state or as U.S. Government. They include sales and dispositions that do not go through usual marketing channels such as gifts to non-profit organizations, intra-plant or company transfers, etc.

Mower Conditioners All Types 1979	Mower Conditioners All Types 1980	Manure Spreaders Conveyor-Type 1979	Manure Spreaders Conveyor-Type 1980	
242	141	18	18	Alabama
2	8	1	1	Alaska
6	12	9	8	Arizona
57?	371	115	89	Arkansas
49	45	86	70	California
166	160	71	58	Colorado
90	96	85	64	Connecticut
18	19	73	58	Delaware
124	87	30	31	Florida
279	229	51	47	Georgia
1	.....	2	1	Hawaii
123	167	137	137	Idaho
773	606	916	593	Illinois
709	529	717	489	Indiana
1,480	1,095	2,391	1,393	Iowa
1,010	638	263	201	Kansas
1,217	817	316	266	Kentucky
126	48	26	29	Louisiana
121	117	119	113	Maine
182	116	230	215	Maryland
81	53	76	72	Massachusetts
786	685	824	750	Michigan
1,474	1,062	1,995	1,537	Minnesota
198	101	31	19	Mississippi
1,787	1,199	441	321	Missouri
129	155	50	51	Montana
623	485	549	345	Nebraska
12	9	7	6	Nevada
70	75	53	59	New Hampshire
80	58	63	55	New Jersey
38	23	8	11	New Mexico
1,265	1,178	1,649	1,545	New York
389	285	166	145	North Carolina
172	140	114	107	North Dakota
1,121	808	1,033	820	Ohio
960	617	36	57	Oklahoma
201	279	135	112	Oregon
1,252	934	1,429	1,222	Pennsylvania
6	4	1	.....	Rhode Island
141	79	32	30	South Carolina
147	91	362	216	South Dakota
943	569	188	156	Tennessee
1,548	1,120	153	144	Texas
168	205	106	118	Utah
253	250	282	223	Vermont
762	674	261	232	Virginia
156	262	150	137	Washington
250	177	99	64	West Virginia
3,202	2,519	3,103	2,253	Wisconsin
74	55	54	37	Wyoming
.....	.....	.....	.....	U.S. Government
.....	.....	1	8	Miscellaneous
25,600	**19,452**	**19,107**	**14,733**	**TOTAL**

New From Acme:

Chrome Alloy Tillage Shapes

So Tough They're Guaranteed Against Breakage



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They're so strong and durable that we are offering an outstanding guarantee against breakage: "Any Acme Tillage Shape that breaks or bends during its useful life (i.e. before ½ inch of the cutting surface is worn off) **will be replaced free of charge** if all other Acme General Product Warranty provisions are met."
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- ☐ Acme's Bale Boss - *the round bale feeding system.*
- ☐ Acme's Horn Gate - *the gate that opens at your command.*
- ☐ The complete line of Acme Products.

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FARM TRACTOR HORSEPOWER:

■IF YOU have the spirit to study the 1980 farm tractor retail sales horsepower table we're presenting here in comparison with 1979 results (see I&T April 21, 1980), you'll probably run into some subtle but interesting shifts.

In the four-wheel-drive tractor group, the sales slump was scarcely felt by the under-200-hp bracket, where volume was off by only 112 units, going from 4,944 in 1979 to 4,832 in 1980. And this was in spite of International Harvester's strike, which lasted through the first four months of the year. (IH's 2+2 line consists of under-200-hp sizes exclusively.)

The top category of the four-wheelers—over 250 hp—went up in sales by about 20 per cent, from 1,585 to 1,896 units. The middle bracket—200-249 hp—experienced the substantial decline, falling 16 per cent from 4,926 and 4,159 retail sales.

There were 52,328 two-wheel-drive tractors of 100 hp or more sold last year, down 12,000 from the year before. Units of 150 hp or more had 26 per cent of that market in 1979 and 29 per cent in 1980—an inching up.

Happy news

After a solid year of generally depressing sales data, I&T was resolved to come up with something of an uplifting nature as part of this annual review. We found it. The tractor markets may have been down substantially in Iowa, Texas, Wisconsin, Kansas and some other farm areas, but the "miscellaneous" department was booming! It went from only 49 units in 1979 to 374 last year, a 663 per cent improvement. And the United States Government also increased its purchases—from 155 units to 220—by 42 per cent!

There were several states that posted tractor sales increases that were pretty good. The only problem was that there weren't enough tractors involved in the improvement. We're talking about states such as Connecticut (up 25 per cent to 236 units), Arizona (up 25 per cent to 993 tractors), Montana (up 6 per cent to 1,438) and Florida (up 11 per cent to 2,593). □

	Two-Wheel-Drive Tractors						
State	40-49	50-59	60-69	70-79	80-99	100-119	120-129
Alabama	629	273	236	129	231	185	46
Alaska	4	9	5	2	4	1	.....
Arizona	73	30	81	105	129	112	14
Arkansas	612	323	275	84	117	75	72
California	596	695	951	475	553	309	69
Colorado	116	105	90	28	100	102	45
Connecticut	60	40	64	21	20	13	.....
Delaware	14	20	23	10	18	17	4
Florida	537	338	534	310	341	198	29
Georgia	775	310	304	202	263	194	75
Hawaii	32	18	9	7	9	1	.....
Idaho	91	119	152	34	180	191	72
Illinois	213	251	409	284	410	551	257
Indiana	272	230	296	169	306	348	147
Iowa	78	150	419	247	606	934	306
Kansas	144	128	174	75	270	477	209
Kentucky	974	802	624	301	444	187	49
Louisiana	546	269	298	121	124	124	51
Maine	67	50	43	11	26	29	2
Maryland	159	103	92	52	71	85	18
Massachusetts	34	41	24	14	19	5	.....
Michigan	280	317	369	176	310	307	81
Minnesota	102	236	469	241	634	784	201
Mississippi	626	274	230	158	226	181	75
Missouri	469	461	489	178	481	378	158
Montana	197	130	148	37	156	135	81
Nebraska	50	58	114	44	308	612	180
Nevada	17	19	15	4	13	14	3
New Hampshire	51	33	31	6	14	8	.....
New Jersey	86	61	38	15	40	19	3
New Mexico	92	37	39	46	27	31	12
New York	258	376	493	191	527	314	39
North Carolina	987	529	426	288	480	258	63
North Dakota	17	32	43	19	79	236	149
Ohio	494	457	473	216	466	414	125
Oklahoma	309	180	181	78	270	389	103
Oregon	361	270	204	54	144	105	21
Pennsylvania	311	375	430	117	386	276	42
Rhode Island	7	4	3	.....	1	1	.....
South Carolina	394	183	177	116	144	99	30
South Dakota	16	35	73	40	233	360	110
Tennessee	877	471	348	157	271	180	52
Texas	1,843	894	915	539	806	709	267
Utah	73	126	122	41	87	61	22
Vermont	44	69	83	23	60	31	1
Virginia	608	397	343	143	263	142	19
Washington	594	534	256	64	150	81	21
West Virginia	196	127	57	35	27	4	2
Wisconsin	146	444	865	401	890	760	202
Wyoming	27	47	29	11	73	55	16
U.S. Government	23	.....	37	149	5	1	.....
Miscellaneous	66	37	45	222	2	.....	.....
TOTAL	15,647	11,517	12,648	6,490	11,814	11,081	3,543

Turn page for: **FARM TRACTORS Makes & Models on the 1981 North American Market**

THE 1980 STORY

1980 Retail Sales of Farm Wheel Tractors by PTO Horsepower (in units)

130-139	140-149	150-179	180 & over	Total 2-Wheel Drive	Four-Wheel-Drive Tractors: Under 200	200-249	250 & over	Total 4-Wheel Drive	All Farm Wheel Tractors	State
199	41	106	62	2,137	30	24	11	65	2,202	Alabama
.....	.....	.....	.....	25	.....	4	2	6	31	Alaska
113	38	94	100	889	31	42	31	104	993	Arizona
306	165	452	456	2,937	106	158	84	348	3,285	Arkansas
325	49	232	119	4,373	132	177	136	445	4,818	California
247	28	152	88	1101	76	113	41	230	1,331	Colorado
9	1	2	.....	230	5	1	.....	6	236	Connecticut
18	2	6	5	137	2	5	2	9	146	Delaware
110	24	42	18	2,479	46	50	18	114	2,593	Florida
389	81	180	120	2,893	11	32	8	51	2,944	Georgia
.....	.....	1	.....	77	1	.....	1	2	79	Hawaii
215	56	115	20	1,245	83	95	28	206	1,451	Idaho
1,371	358	1,017	430	5,551	423	316	152	891	6,442	Illinois
683	187	410	218	3,266	232	196	87	515	3,781	Indiana
2,029	556	788	250	6,363	404	267	102	773	7,136	Iowa
894	154	637	393	3,555	290	382	95	767	4,322	Kansas
206	42	103	61	3,793	34	28	16	78	3,871	Kentucky
208	161	340	424	2,666	84	122	58	264	2,930	Louisiana
10	.....	2	1	241	3	.....	.....	3	244	Maine
57	17	29	8	691	12	13	7	32	723	Maryland
3	1	.....	.....	141	1	.....	.....	1	142	Massachusetts
435	90	166	57	2,588	188	110	51	349	2,937	Michigan
1,106	226	424	110	4,533	378	274	115	767	5,300	Minnesota
331	107	563	470	3,241	72	90	98	260	3,501	Mississippi
582	157	323	165	3,841	101	81	66	248	4,089	Missouri
112	37	76	27	1,136	96	134	72	302	1,438	Montana
1,036	240	512	218	3,372	223	112	44	379	3,751	Nebraska
15	1	3	1	105	7	5	.....	12	117	Nevada
3	.....	.....	.....	146	2	.....	.....	2	148	New Hampshire
19	4	4	7	296	3	.....	1	4	300	New Jersey
59	7	40	11	401	8	5	6	19	420	New Mexico
211	31	51	11	2,502	72	23	20	115	2,617	New York
220	60	99	85	3,495	33	16	6	55	3,550	North Carolina
540	120	307	128	1,670	386	378	141	905	2,575	North Dakota
572	132	233	110	3,692	204	133	74	411	4,103	Ohio
650	62	274	119	2,615	162	178	33	373	2,988	Oklahoma
106	13	47	14	1,339	51	29	10	90	1,429	Oregon
128	25	27	9	2,126	28	12	12	52	2,178	Pennsylvania
.....	.....	.....	.....	16	.....	.....	.....	.....	16	Rhode Island
122	31	57	63	1,416	18	25	7	50	1,466	South Carolina
506	73	200	50	1,696	153	96	38	287	1,983	South Dakota
268	57	140	119	2,940	41	30	25	96	3,036	Tennessee
1,651	334	857	608	9,423	276	234	114	624	10,047	Texas
57	12	20	5	626	17	10	7	34	660	Utah
16	3	6	1	337	4	.....	.....	4	341	Vermont
102	22	31	31	2,101	15	8	2	25	2,126	Virginia
91	11	43	8	1,853	86	76	38	200	2,053	Washington
6	1	.....	1	456	.....	.....	.....	.....	456	West Virginia
589	153	204	76	4,730	175	69	28	272	5,002	Wisconsin
59	19	17	15	368	27	6	9	42	410	Wyoming
2	.....	3	.....	220	.....	.....	.....	.....	220	U.S. Government
.....	1	.....	1	374	.....	.....	.....	.....	374	Miscellaneous
16,986	**3,990**	**9,435**	**5,293**	**108,444**	**4,832**	**4,159**	**1,896**	**10,887**	**119,331**	**TOTAL**

DATA: Farm & Industrial Equipment Institute. Figures do not include garden tractors, motor tillers, or contractor's off-highway types. Report includes units marketed by these firms: Allied Farm Equip. (Leyland, Satoh); Allis-Chalmers; Belarus; J I Case; Deere; Deutz; Ford; International Harvester; Long; Massey-Ferguson; Steiger; Versatile; R. M. Wade (Satoh); and White. Sales reported as miscellaneous are retail sales which cannot be classified by state or as U.S. Government. They include sales and dispositions that do not go through usual marketing channels such as gifts to non-profit organizations, intra-plant or company transfers, etc.

Implement & Tractor

4/2-1/81 @ 4725-1

High-speed farming: How fast is fast enough?

page 8

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INTERTEC PUBLISHING CORP.

May 7, 1981 • Vol. 96 • No. 11

Implement & Tractor

The Business Magazine of the Farm and Industrial Equipment Industry

in this issue...

8: High-Speed Farming: How Fast Is Fast Enough? Changes that have taken place over the years both in implements and tractors to accommodate faster field speeds are reviewed in the first of two articles by Frank Buckingham.

14: Ethanol: A Fuel Whose Time Has Not Yet Come. The technology and equipment to produce ethanol for farm use is available, but interest has waned in recent months due to many factors including stabilizing prices and an ample supply of petroleum fuel.

24: SIMA Report. Graham Fuller visits the Salon International de la Machine Agricole in Paris and reports on some innovations displayed by European manufacturers.

34: Taking on New Lines. An I&T survey reveals what dealers look for when considering additions to, or changes of, product lines.

46: What Makes a Good Dealer Council Work? Agribusiness consultant Bruce Symonds outlines some major criteria for organizing and sustaining a dealer council.

On the cover... We have no idea how fast the John Deere tractor on the cover was going when the picture was taken, but the natural distortion produced by the camera's wide-angle lens suggested intense speed – bending around a curve – and so it seemed a natural illustration for our High-Speed Farming story.

DEPARTMENTS

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what's ahead...

May 7, 1981

U.S. FARM EQUIPMENT RETAIL SALES THROUGH MARCH, according to the Farm & Industrial Equipment Institute's flash report, reflected the general cautiousness noted by most industry observers in recent months. The brighter spots in March were sales of tractors in the 40-99 hp group, four-wheel-drive tractors and conventional balers. The full report:

Unit Retail Sales

	March			January-March		
	1981	1980	Pct. Change	1981	1980	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
40-100 hp	5,373	5,089	+ 5.6	12,216	13,003	- 6.1
Over 100 hp	3,498	4,259	-17.9	9,134	12,556	-27.3
Total 2-wheel drive	8,871	9,348	- 5.1	21,350	25,559	-16.5
4-wheel drive	880	873	+ 0.8	2,317	2,365	- 2.0
Total Tractors	9,751	10,221	- 4.6	23,667	27,924	-15.2
Combines (S-P)	1,128	1,217	- 7.3	3,819	3,650	+ 4.6
Balers*	610	576	+ 5.9	1,468	1,332	+10.2
Forage Harvesters**	307	366	-16.1	751	1,000	-24.9
Mower Conditioners	920	956	- 3.8	2,084	2,178	- 4.3

*Bales under 200 lbs. **Shear-bar type.

PROJECTING THE SHAPE OF U.S. FARMS AT THE TURN OF THE CENTURY, three USDA economists, William Lin, George Coffman and J. B. Penn, expect that 1 per cent of U.S. farms will account for about half of all farm production and the bottom 50 per cent of farms will produce only 1 per cent by the year 2000. At that time, they estimate, almost two-thirds of the production will likely come from the largest 50,000 farms, and capital requirements will rise to about $2 million of capital assets per farm for farms with sales of $100,000 or more--nearly double what was required in 1978.

DESPITE INDICATIONS THAT PRODUCER PRICES FOR FARM PRODUCTS may rise in coming months, the increases are expected to be small and of limited duration, according to Continental Illinois National Bank, Chicago. Terry Francl, the bank's ag economist, noted that weather developments in the northern hemisphere in 1981 will strongly influence prices and that corn and soybean producers' planting intentions may indicate concern about below-normal subsoil moisture in much of the Corn Belt. Livestock producers, he added, may get higher prices later this year as cutbacks in production take effect.

SHORT-TERM INTEREST RATES, such as the bank prime rate and the

(Continued on page 6)

AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

YODER & FREY, INC.
Archbold, Ohio
(March 9 & 10, 1981)

ALLIS-CHALMERS TRACTORS

7050 diesel, 1977 (Fair) 9100*
7040 diesel, 1976 (Excellent) 12,900
7030 diesel, 1975 (Good) 8900
XT190 diesel, (Good) 6100*
XT190, 1968 (Good) 4350
XT190 diesel, 1968 (Fair) 4800
190, 1964 (Fair) 3300
XT190 LP, 1967 (Fair) 2650*
221 diesel, 1970 (Fair) 7400
180 diesel, 1971 (Good) 5950
175, Idr., 1972 (Fair) 6200
170, 1967 (Fair) 4900
D19, 1964 (Fair) 2450
D17 diesel, 1962 (Fair) 3250
D17, 1962 (Fair) 1300
D17, 1960 (Fair) 1700*
WD45, plow, 1952 (Fair) 1150
WD, 1948 (Fair) 720
WD, 1948 (Fair) 710

CASE TRACTORS

1370 diesel, 1975 (Fair) 9600*
1200, bld., (Fair) 7600*
1030 diesel, 1964 (Fair) 4875
1030 diesel, 1964 (Fair) 3750*
930 diesel, 1961 (Fair) 3025
830, 1962 (Fair) 3200
630, 1958 (Fair) 1700
600, 1954 (Fair) 820
430, 1959 (Fair) 2300
500 diesel, 1957 (Good) 1700

DAVID BROWN TRACTORS

1200, 1965 (Good) 3000*
1200, 1963 (Fair) 2400*
995, 1971 (Fair) 3450
990, 1962 (Fair) 1625

JOHN DEERE TRACTORS

8630 diesel, 1977 (Excellent) 35,600
7520 diesel, 1972 (Good) 15,500*
4630 diesel, duals, 1976 (Excellent) 20,750
4620 diesel, 1969 (Good) 10,250*
4620 diesel, 1969 (Fair) 8450
4620 diesel, 1969 (Good) 8100*
4520 diesel, 1970 (Fair) 10,600
4520 diesel 9200
4520 diesel, 1970 (Fair) 7950
4520 diesel, 1969 (Good) 7300*
4430 diesel, 1976 (Excellent) 19,300*
4430 diesel, 1976 (Good) 16,200*
4430 diesel, 1973 (Fair) 11,800
4320 diesel, 1971 (Good) 10,200
4320 diesel, 1971 (Fair) 9000*
4320 diesel, 1971 (Fair) 8100*
4230 diesel, 1975 (Good) 16,500
4230 diesel, 1974 (Excellent) 14,300
4230 diesel, 1974 (Fair) 11,800*
4230 diesel, 1974 (Fair) 11,000
4020 diesel, 1970 (Excellent) 9050
4020 diesel, 1968 (Good) 8500
4020 diesel, 1968 (Good) 7950
4020 diesel, 1967 (Fair) 8050
4020 diesel, 1967 (Fair) 5400*
4020 diesel, 1966 (Fair) 7000
4020 diesel, 1966 (Fair) 6850*
4020 diesel, 1966 (Fair) 5900
4010, 1963 (Good) 4500
4010 diesel, 1963 (Fair) 4200
4010 diesel, 1960 (Good) 4475
4010 LP, 1961 (Fair) 3200
3020 diesel, 1968 (Good) 5750*
3020 diesel, 1968 (Good) 5200
3020 diesel, 1968 (Fair) 4775
3020, 1966 (Good) 4100
3010, 1963 (Rough) 3375
3010, 1962 (Fair) 2375
2520, 1969 (Good) 4225
2510, 1966 (Good) 3425
2240, Idr., (Good) 8000
2010, 1964 (Good) 3400
2010, 1963 (Fair) 2000
2010, Idr., 1961 (Good) 3450
2010, 1961 (Fair) 3000
2010, Idr., 1960 (Rough) 1700
730 diesel, 1960 (Good) 2600
730 diesel, 1958 (Good) 2100
620, 1956 (Fair) 1425
520, 1956 (Fair) 1500*
430, 1957 (Fair) 1375
70, 1956 (Good) 1500
60, 1954 (Good) 1230
60, 1956 (Fair) 875

FORD TRACTORS

9000 diesel, 1970 (Good) 7400
9000 diesel, 1970 (Good) 7400*
6000, 1961 (Good) 1700
5000, 1971 (Good) 5350
5000, 1968 (Fair) 3100*
4000, 1975 (Fair) 4075*
4000 diesel, 1963 (Fair) 2400
4000, Idr., 1957 (Fair) 1910
3600, (New) 8100*
3600 diesel, (Excellent) 7800*
3400, Idr., 1970 (Fair) 3100*
3400, Select-O-Speed, 1970 (Fair) 1975
3000, Idr., 1969 (Good) 3700
871, 1955 (Good) 1600
861 LP, Idr., ... 1500
860, Idr., 1957 (Good) 1825
800, Idr., 1956 (Fair) 1975
800, 1954 (Fair) 1830
660, 1956 (Fair) 1625
NAA, 1953 (Fair) 1375
Jub., 1953 (Fair) 1290
Sup. Maj., 1956 (Fair) 1025
8N, 1952 (Fair) 1100
8N, 1952 (Fair) 1075
8N, 1951 (Good) 1525
8N, Idr., 1950 (Rough) 1185
8N, 1950 (Fair) 1060
8N, 1950 (Fair) 1050
8N, 1949 (Fair) 1025
8N, 1949 (Good) 1600
8N, 1948 (Fair) 975
9N, 1946 (Fair) 890
9N, 1944 (Fair) 800

INTERNATIONAL HARVESTER TRACTORS

1566 diesel, cab, air, 1974 (Good) 11,800*
1566 diesel, 1972 (Fair) 10,500*
1466 diesel, 1972 (Good) 12,650
2500, Idr. 3400
1256 diesel, 1967 (Rough) 5850
1206 diesel, 1967 (Fair) 5450
1206, 1963 (Good) 5850
1086 diesel, 1977 (Fair) 15,000*
1066 diesel, 1972 (Good) 12,000
966 diesel, 1972 (Fair) 8300*
966 diesel, 1973 (Fair) 9350
966 diesel, (Good) 7800*
886 diesel, 1977 (Fair) 10,800
856 diesel, 1968 (Fair) 7500
856, 1967 (Fair) 7750
856 diesel, 1970 (Fair) 7500
826 6200
766 diesel, 1972 (Good) 8350*
806 diesel 6900
806 diesel, 1966 (Fair) 5600*
806 diesel, 1965 (Fair) 5050
806, 1964 (Fair) 5650
806 diesel, 1964 (Good) 6350
806 diesel, 1963 (Fair) 5450
806 diesel, 1964 (Fair) 4300
766, 1972 (Good) 6400
706 diesel, 1965 (Good) 4675
706 diesel, 1964 (Fair) 4400
706, 1963 (Good) 4800
706, 1963 (Good) 4800
666, 1972 (Excellent) 6400
656 diesel, 1967 (Good) 5350
656, 1967 (Fair) 3000
560, (Fair) 2450
560, Idr., (Rough) 1575
560, 1960 (Fair) 1550
560, 1959 (Fair) 1500
560 diesel, 1958 (Fair) 1450
474, 1972 (Good) 4925
460, 1961 (Good) 1900
460, 1960 (Fair) 1700
460, 1960 (Fair) 1700
460, 1959 (Good) 1800
460, 1959 (Fair) 1500
460 LP, 1959 (Fair) 1125*
434, Idr., 1963 (Fair) 2900
434 2250
B414, 1949 (Fair) 1200
400, 1956 (Good) 1625
340, Idr., 1958 (Rough) 1600
B275, Idr., 1958 (Good) 1825
B275, Idr., 1956 (Fair) 1050
Sup. M, 1953 (Good) 1450
Sup. M 1425
Sup. M, 1953 (Fair) 1375
MTA, 1953 (Fair) 1250
Sup. M, 1953 (Fair) 1125
M, Idr., (Rough) 975
M, 1951 (Fair) 785
Sup. H, 1953 (Good) 1125
H, 1946 (Fair) 565
A, cult., 1950 (Fair) 1125
A, 1948 (Fair) 725
Sup. C, 1951 (Fair) 1050
Cub Loboy, mo., 1969 (Good) 1725

MASSEY-FERGUSON TRACTORS

2675 diesel, 1979 (Excellent) 16,600*

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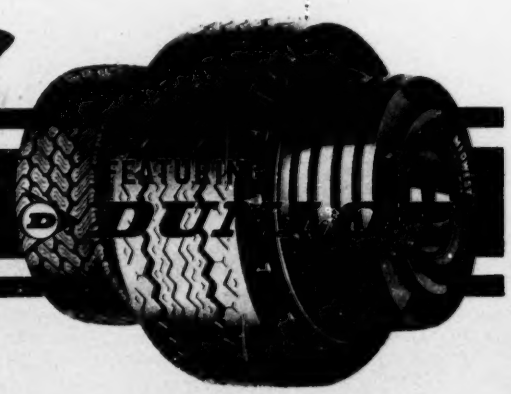

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Auctions *(continued)*

1150 diesel, 1972 (Fair) 6800
1105 diesel, 1978 (Excellent) 13,700*
1100, 1964 (Fair) 2500
1085, 1978 (Excellent) 12,800
245, ldr., 1977 (Fair) 5175
202 2300
180, 1970 (Fair) 3400*
175, 1965 (Fair) 4400
135, 1964 (Fair) 4025
65 diesel, 1958 (Good) 2850
65, ldr., ... 1650
35, 1960 (Fair) 1550

OLIVER TRACTORS

1850, 1966 (Rough) 3500
1850 diesel, 1965 (Fair) 4075
1850, 1964 (Fair) 3400*
1850, 1962 (Fair) 3950
1800 diesel, 1963 (Good) 3550
1800, 1963 (Fair) 3150
1800, 1962 (Good) 2450
1800, 1962 (Good) 2800*
1800, 1962 (Fair) 2350*
1650 diesel, 1962 (Fair) 4150
880, 1960 (Fair) 1150
880 1100
Sup. 99 1925
77, 1950 (Fair) 500

VERSATILE TRACTOR

750 diesel, 1978 (Good) 34,000*

WHITE TRACTORS

4-180, 1974 (Fair) 14,500*
4-150, 1973 (Fair) 13,300*
2-255, 1970 (Fair) 10,500*
2-150, 1977 (Good) 13,000
2-105, 1973 (Rough) 9250

JONES FARM EQUIPMENT CO.
Dothan, Alabama
(March 10, 1981)

ALLIS-CHALMERS TRACTORS

7045 diesel, cab, duals, 1978 (Excellent) 13,250*
7045 diesel, duals, cab, 1978 (Excellent) 13,500*
7040 diesel, 1977 (Fair) 7000
D17, 1958 (Rough) 425
C, har., 1946 (Rough) 375
G, cult., plt., plow, 1949 (Good) 1000*

CASE TRACTORS

611B, 1958 (Good) 1450
580 diesel, ldr., backhoe, 1971 (Good) 4750*
430 diesel, 1968 (Fair) 1250*
VAC, (Rough) 100

DEUTZ TRACTOR

8005 diesel, (Good) 4300*

MASSEY-FERGUSON TRACTORS

1800 diesel, 1971 (Good) 5600*
1155 diesel, 1973 (Fair) 8250
1155 diesel, 1973 (Fair) 7600*
1155 diesel, 1973 (Fair) 7600*
1105 diesel, duals, 1974 (Fair) 5550*
1100 diesel, 1967 (Fair) 3750*
1085 diesel, 1974 (Good) 5500
1085 diesel, 1974 (Excellent) 6400
1080 diesel, 1971 (Good) 4200*
285 diesel, 1977 (Excellent) 7800*
285 diesel, 1966 (Excellent) 7300*
275 diesel, 1976 (Good) 6400*
275 diesel, 1975 (Good) 6600
245 diesel, 1977 (Excellent) 6800
180 diesel, 1969 (Good) 3800*
180 diesel, 1968 (Fair) 3400*
180 diesel, 1967 (Fair) 3500*
180 diesel, 1966 (Rough) 2800*
175 diesel, 1968 (Good) 3700*
165 diesel, 1971 (Fair) 3400
165 diesel, 1967 (Fair) 2850
165 diesel, 1966 (Fair) 3000
165 diesel, 1966 (Rough) 2400
165 diesel, 1966 (Good) 3350
150 diesel, 1968 (Fair) 2500
150 diesel, 1967 (Good) 3000
150 diesel, 1965 (Good) 3000
150 diesel, 1965 (Good) 3250*
135, 1974 (Excellent) 4600*
135, 1966 (Fair) 2250
130 diesel, 1968 (Good) 1725
65 diesel, 1964 (Good) 2050
65 diesel, 1964 (Good) 2100*
65 diesel, 1964 (Good) 2100*
65 diesel, 1963 (Good) 2200
65 diesel, 1963 (Good) 2175
65 diesel, 1963 (Good) 2300*
65 diesel, 1963 (Fair) 1800
65 diesel, 1962 (Rough) 1400*
65 diesel, 1962 (Rough) 1475
65 diesel, 1962 (Fair) 1500
65 diesel, 1960 (Fair) 1400*
65, 1958 (Fair) 1650
50 diesel, 1962 (Good) 1900
50 LP, 1958 (Fair) 1250*
35, ldr., 1961 (Fair) 2150*
35 diesel, 1961 (Good) 2200
35, 1959 (Good) 2100*
35, 1956 (Good) 1600
TO30, 1952 (Fair) 825*

FORD-FERGUSON TRACTORS

9N, 1944 (Rough) 525
9N, 1944 (Good) 925
9N, 1943 (Fair) 725

FORD TRACTORS

9000 diesel, duals, 1972 (Good) 5600*
8000 diesel, duals, 1968 (Good) 4600*
8000 diesel, 1968 (Good) 4650
7700 diesel, 1978 (Good) 12,000*
7000 diesel, 1975 (Good) 6300
5000 diesel, 1975 (Excellent) 5600
5000 diesel, 1972 (Good) 4500
5000 diesel, 1970 (Good) 4500
4000 diesel, 1967 (Good) 3200
4000 diesel, 1966 (Good) 3300
4000 diesel, 1966 (Good) 3375
4000 diesel, ldr., 1965 (Fair) 3100
4000 diesel, 1963 (Good) 1600*
3000 diesel, 1968 (Good) 3300
3000, 1968 (Good) 3375
3000 diesel, 1966 (Excellent) 4175*
2000 diesel, 1967 (Good) 3000
2000 diesel, 1966 (Good) 3000
2000, 1963 (Excellent) 2375*
2000, 1963 (Good) 1500
871 diesel, Select-O-Speed, 1958 (Good) 1200
861, 1961 (Good) 1950*
860, 1957 (Good) 2125
850, 1955 (Good) 1800*
841 diesel, 1958 (Fair) 1525
640, 1957 (Excellent) 2600
640, 1955 (Good) 2100*
621, 1960 (Good) 1700*
Sup. Maj. diesel, 1962 (Good) 850

(Continued on page 50)

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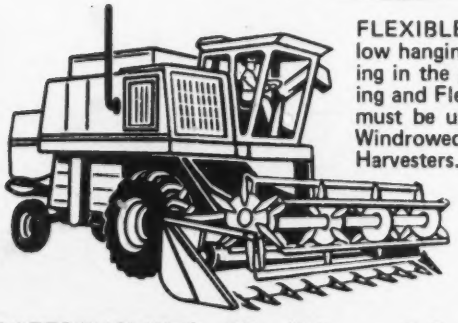

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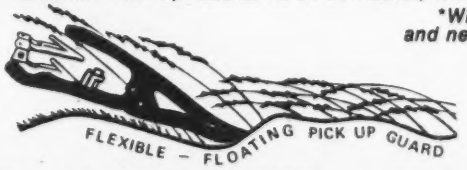

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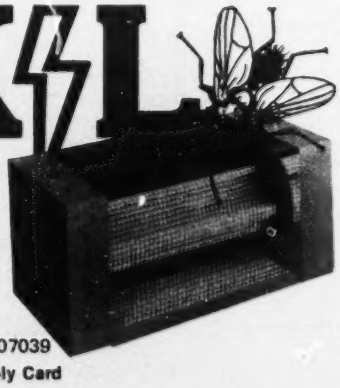

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Auctions

(Continued from page 30)

Dexta, 1959 (Good) 1100
Jub., 1953 (Good) 1500
Jub., Idr., 1953 (Fair) 1250
Jub., 1953 (Good) 1700
Jub., 1953 (Good) 1600
Jub., 1953 (Good) 1650*
8N, 1952 (Excellent) 1375*
8N, 1951 (Good) 1125*
8N, 1951 (Good) 1000*
8N, 1951 (Rough) 750
8N, 1951 (Excellent) 1275
8N, 1951 (Good) 1250
8N, 1951 (Good) 1250
8N, 1950 (Fair) 900
8N, 1950 (Good) 1050
8N, 1948 (Good) 1200
8N, 1948 (Fair) 850
8N, 1948 (Excellent) 1400*

INTERNATIONAL HARVESTER TRACTORS

1586 diesel, 1975 (Good) 9500
1468 diesel, duals, 1974 (Good) 6600
1466 diesel, duals, 1974 (Good) 9500
1466 diesel, 1971 (Fair) 7500*
1256 diesel, 1967 (Fair) 4400
706 diesel, 1967 (Good) 4200*
656, 1971 (Fair) 2700*
424, 1965 (Good) 2200
364 diesel, 1976 (Fair) 2400*
300, 1955 (Rough) 475
284, 1978 (Excellent) 5000*
240, cotton picker, 1961 (Fair) 650
MD, 1948 (Good) 500*
Sup. M, duals, 1953 (Fair) 650
H, 1946 (Fair) 325
C, cult., 1949 (Excellent) 1000
Sup. A, cult., 1950 (Good) 1400
A, har., 1946 (Fair) 700
Cub, mo., 1948 (Good) 975
Cub, cult., plt., plow, 1952 (Excellent) 1750

JOHN DEERE TRACTORS

4630 diesel, 1973 (Good) 12,900*
4430 diesel, 1974 (Good) 12,500*
4430 diesel, 1973 (Fair) 8450*
4240 diesel, cab, 1978 (Excellent) 22,500*
4230 diesel, 1974 (Fair) 7800*
4030 diesel, 1973 (Excellent) 12,500*
4020 diesel, 1965 (Good) 5100*
4020 diesel, 1965 (Good) 5500
3010 diesel, 1962 (Good) 3200*
3010 diesel, 1961 (Excellent) 3675
2030 diesel, 1974 (Excellent) 5000
2020 diesel, 1966 (Good) 4100*
2010, 1965 (Good) 1800
2010 diesel, 1963 (Rough) 800
2010, Idr., backhoe, 1963 (Fair) 1950*
2010 diesel, 1963 (Fair) 1200
1010, 1963 (Fair) 2000
1010, 1961 (Good) 1500*
1010 diesel, 1961 (Fair) 1025*
950 diesel, 1978 (Fair) 3800
430, 1960 (Good) 1200
430, 1958 (Good) 1050
420, 1956 (Good) 1100
310 diesel, Idr., backhoe, 1972 (Good) 8000
300 diesel, Idr., backhoe, 1970 (Good) 3750
300 diesel, Idr., backhoe, 1970 (Fair) 2900*
40, 1954 (Good) 1100
40, 1954 (Fair) 750
40, 1954 (Fair) 875
40, 1954 (Good) 1250
M, cult., plt., 1949 (Good) 825

LEYLAND TRACTORS

384 diesel, 1971 (Rough) 1425
384 diesel, 1971 (Fair) 1750

LONG TRACTOR

560 diesel, (Good) 2700*

KUBOTA TRACTOR

245, (Excellent) 4000

SATOH TRACTOR

S650, (Good) 1825

NOTES
Prices reported are for individual sales at wholesale on "as is," "cash and carry" basis.
Prices reported are NOT averages.

Condition classifications: EXCELLENT means—Engine: in perfect condition, 400 to 600 hours of use; Rubber: 80% tread remaining, no breaks or cracks; Paint: original and bright; General Appearance: excellent.

GOOD means—Engine: good running condition; Rubber: 70% tread remaining, no breaks or cracks; Paint: original paint or a good repaint job; General Appearance: good over-all.

FAIR means—Engine: possibly in need of a minor overhaul to restore; Rubber: 60% tread remaining, some cracking evident in side walls; Paint: only fair, weathered and some rust apparent; General Appearance: worn, some dents, minor parts such as gage covers missing or broken.

ROUGH means—Engine: obviously in need of a major overhaul; Rubber: smooth; Paint: scarred, weathered, rusty, needs painting urgently; General Appearance: dents, ruptures, broken parts, loose wires, some components such as lights broken, missing or inoperative.

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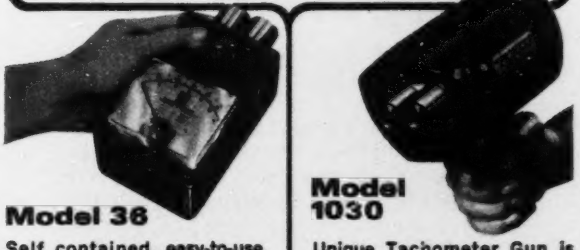

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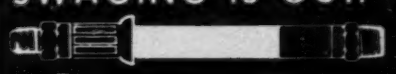

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What are dealers looking for when they consider adding to or changing their product lines?

By Bill Fogarty

"Will it be popular in my area?" got the gold medal, but general product reliability got the most total points.

■WHEN DEALERS are looking for a different franchise, either in addition to or in replacement of one they already have, what are they most concerned about?

In an I&T survey, which was mailed to 3,000 U.S. farm equipment dealers, we put that question forward. We got back 607 usable responses—over 20 per cent—and almost all respondents dealt with it.

We gave dealers six franchise factors to rank in terms of importance to themselves and we left a seventh one blank, offering the dealer a chance to fill in something he might consider important that we had overlooked.

The six factors, in the order they appeared on the questionnaire:

- Sense of personal relationship, fairness.
- General product popularity, suitable to my area.
- General product quality, reliability.
- Adequate trade territory, distribution/allocation.
- Parts, service backup (training, supply system, etc.).
- Counseling in financial, personnel and management concerns.
- Other (please specify).

As for the seventh item, the "other" important consideration, we needn't have bothered. Our six franchise factors seemed to cover it for all participating dealers; none had any to add.

The tallying told us that general product popularity for the trade area was ranked first by a few more dealers than general product reliability. The other factors were ranked as top priority by only one dealer in five.

As a second most important consideration, product reliability was mentioned by the largest percentage of dealers—38.8—and the quality of parts and service backup was ranked second by about three out of 10 dealers. As a third most important factor, parts and service was most frequently mentioned—by one out of three dealers.

While the parts and service backup system is a top consideration for only 8 per cent of respondents, it becomes very significant as a secondary (29.7 per cent) and tertiary (33.6 per cent) consideration. Likewise, the matter of trade territory gets ranked as number one by only 5 per cent of survey participants and as number two by only 10.7 per cent, but it is a rather strong third consideration—25.5 per cent.

The most typical pattern of dealer evaluation is, then, to think first about the general product popularity—its potential sales volume locally—then about its likelihood of giving good service to the customer—i.e., reliability—and then the level of help he is likely to get from the supplier if and when problems develop.

As we looked over the low ratings given personal relationships and a

When dealers consider an additional or replacement product line....

How They Rank (per cent)

Their Main Concerns	First	Second	Third	Weighted Value
General product popularity	42.3	15.9	16.1	174.8
General product reliability	38.1	38.8	12.8	204.7
Parts, service backup	8.0	29.7	33.6	117.0
Adequate trade territory	5.0	10.7	25.5	61.9
Personal relationships, fairness	6.5	4.4	10.7	39.0
Management counseling	0.2	0.4	1.3	2.7

sense of fairness, and to such services as financial counseling, we realized that these considerations, so much talked about over the years at dealer gatherings and so much a part of manufacturers' dealer development programs, are things that come into play at some point after the dealer has established a replacement or additional line to the one he already had.

Our own experience in observing this industry's retail organizations is that the dealer gets most restless when his present supplier (which could be a major, a shortliner or both) is slow in picking up on shifts in demand he sees in his territory. He sees that dealer across the street selling something new—maybe a tillage tool that farmers are finding can tame the local soil, maybe a foreign tractor that fills a horsepower void—and he feels he is losing total market share because his supplier company or companies have nothing comparable in the line. That's when he starts looking more closely at ads in trade magazines and takes an extra walk around the exhibition hall at his association's equipment show, looking for something similar.

But most dealers with much experience in the business know that they could be reaching for trouble if they don't pay very serious attention to product quality concerns. That's why just about as many dealers ranked product reliability number one as product popularity. In fact, if you weight the dealer responses in the survey, giving three points to a first ranking, two points to a second and one to a third ranking, the product reliability concern is greatest—204.7 points compared with 174.8 for product popularity.

If we were to be circulating the same survey among dealers today (we sent it out in September, 1979), we would throw in another consideration for dealers to weigh in looking over new and/or replacement product lines—financing terms. Present conditions in the business are such that we think dealers would rank terms offered as a fairly high consideration. It's a factor that certainly gets a lot of attention in ads to farmers.

Ranking present suppliers

If dealers have their priorities when looking for new or replacement product lines, how do they tend to rank the major suppliers they already have in these same categories?

The same survey asked dealers to rate their major franchisor in seventeen selected categories of varying importance. We gave the dealer respondent three choices on this one—adequate, more than adequate, less than adequate. Here's what they told us:

Consistency of product reliability: More than adequate, 22.8 per cent; adequate, 66.9 per cent; less than adequate, 10.3 per cent. **Quality of components and materials:** (a related concern): More than adequate, 23.4; adequate, 70.1; less than adequate, 6.5.

Suitability of product line for your area: More than adequate, 30; adequate, 63.1; less than adequate, 6.9. **Product's reputation among customers and prospects** (another related concern): More than adequate, 30.3; adequate, 63.0; less than adequate, 6.7.

Parts inventory / supply / delivery

(More...)

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• Water or slurry application
LONG

Circle (25) on Reply Card

Dealers' Franchises

(continued)

system: More than adequate, 25.7; adequate, 59.8; less than adequate, 14.5. **Service backup (including training, rep's know-how, responsiveness to problems, warranty handling fairness):** More than adequate, 15.7; adequate, 55.1; less than adequate, 29.2.

The responding dealers, then, seem to have a general level of satisfaction with their suppliers. Only in the last ranking—service backup—do we find fewer "more than adequate" responses than "less than adequate." It signifies that dealers will generally be slow to turn their attention to other product lines for either replacement or supplementing of what they are already selling.

But change they do! The same survey revealed that 35.4 per cent of survey respondents had added or changed product lines in the previous five years. Seventeen per cent had dropped a line and 21.6 per cent had added a line. Another 11 per cent indicated they were considering changing to another line or dropping a present one. □

INDUSTRY IN MOTION

Paul M. Soubry, president, **Versatile Farm Equipment Corp.,** Kansas City, Mo., has announced the appointment of Larry S. Leavelle as manager of sales.

Bomford & Evershed Ltd., manufacturers of pto and boom-type tractor-mounted flail mowers, has appointed Implement Sales Co., Inc., Memphis, Tenn., as its distributor in Alabama, Arkansas, Louisiana, Mississippi and Tennessee.

Robert E. Evensen has been appointed as a sales representative for **Shaver Mfg. Co.,** Graettinger, Iowa.

Claas of America, Inc., Troy, Mich., subsidiary of Claas OHG of West Germany, has announced the appointment of four regional managers for North American combine sales and marketing: W. H. Morris, Southern; Michael R. Synon, Northwest; Jimmy Ray Harris, Central; and Oris L. Miller, North-Central. North American sales will be through selected Ford Tractor dealerships.

The **Gay Hose Corp.,** Niles, Mich., has changed its name to **Polymer Hose & Coupling, Inc.** The company is a subsidiary of The Polymer Corp., Reading, Pa.

A. Leslie Fitzgerald, Abilene, Texas, has received **Allis-Chalmers'** Distinguished Sales Award for producing the highest percentage of sales gain in total dollar volume for the entire A-C Agricultural Equipment, North American Sales Division.

A newly-formed company, **McCall Industries,** Houston, Tex., has purchased **Lockwood Corp.,** Gering, Neb. Lewis Armstrong, president of Lockwood, and several of the company's vice-presidents are minority stockholders in McCall, which will spend more than $1 million on capital expansion plans.

Michael K. Greenburg has been named president and chief executive officer of **Special Products Co.,** Golden, Colo. He succeeds Rawlen T. Smith who becomes chairman of the board.

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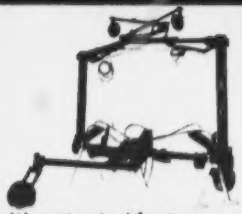

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Selling Out, Part I:

GRADUAL TRANSFER OF OWNERSHIP

The Oil City Tractors case history starts on page 22

More About Rapid Farming page 10

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INTERTEC PUBLISHING CORP.

May 21, 1981 • Vol. 96 • No. 12

Implement & Tractor

The Business Magazine of the Farm and Industrial Equipment Industry

in this issue...

10: Old Weighting Habits Are Hard to Break. A study of Nebraska Tests shows that the trend is to tractors that do best at 5 mph/15 pct. slippage. The second of a two-part series on high-speed farming.

22: Gradual Transfer of Ownership at Oil City Tractors. Texas Dealer Charlie Howard developed a plan with key employees whereby they would purchase the dealership over a number of years. Here's how the principals feel about the arrangement after three years. Part I of a series on Selling The Business.

34: Manager, Manage Yourself. The program at the Farm Equipment Manufacturers Assn.'s Spring Management Clinic in San Diego dealt with personal financial management and how to cope with stress.

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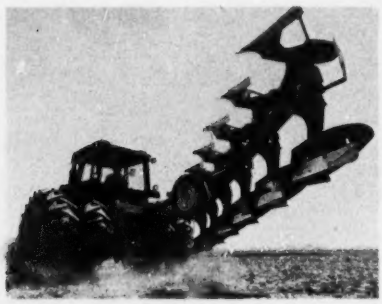
High-speed farming, part II:

Old weighting habits are

Study of Nebraska Test shows that the trend is to tractors that do best at 5 mph/15 pct. slippage. (What happened when the dealer added weights in a competitive deal?)

By Frank Buckingham



■THOUGH some engineers question the necessity and practicality of the Nebraska Tractor Tests for present tractors, the tests do provide means of comparing models under reasonably uniform conditions. Nebraska drawbar tests are conducted on a concrete track, however, which bears little resemblance to field conditions in many seasons.

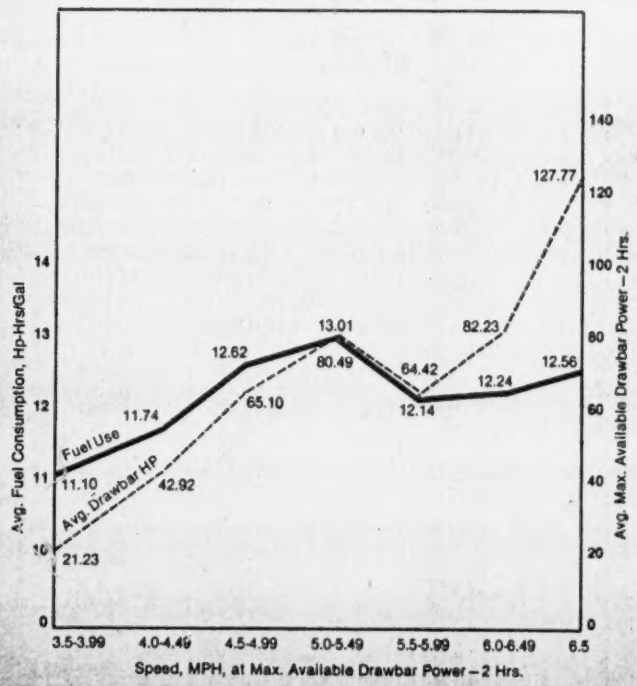
It's also frequently pointed out that farmers don't normally ballast their tractors the way they are weighted at Nebraska. Some load them much heavier, to the chagrin of manufacturers.

One tractor specialist said he had been called to the West Coast shortly after the introduction of a new four-wheel-drive model to investigate repeated drive train failures in one area. Tractors with maximum permissible working weight of 25,000 lbs. were found ballasted to more than 40,000 lbs. to pull large V-subsoilers. After removing excess ballast and some subsoiler shanks, he demonstrated that an equal area could be worked in the same time period at a much higher speed.

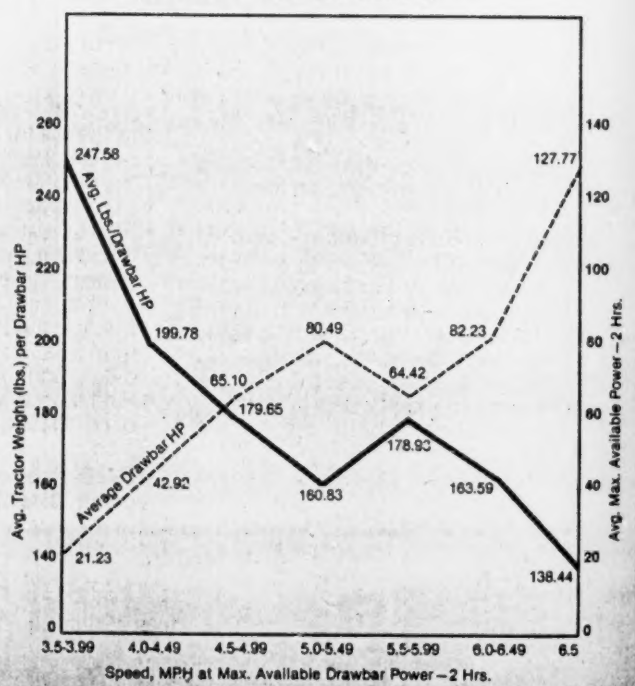
Another tractor specialist recently took exception to this author's statement, in a different publication, that few farmers weight tractors as heavily as those tested at Nebraska. He then described results of a tractor weighing program in which he participated in the Wheat Belt. The average tractor weight as found on farms in some areas was from *3,000 to 6,000 lbs. above the maximum working weight,* based on OSHA standards for ROPS protection.

Old habits are hard to break. But some dealers and farmers in certain parts of the country apparently still

1. Drawbar Power and Fuel Consumption vs. Speed
(93 current 2WD diesel tractors)



2. Average Drawbar Power & Lbs. Drawbar HP vs. Average Speed
(93 current 2WD diesel tractors)



ard to break

base implement selection and ballasting for rubber-tired tractors on experience gained from working crawler tractors—which literally crawled through the field. It is recognized that soil conditions are often different in those areas than in other parts of the country, and some abrasive soils cause rapid tire wear if slippage approaches what would be acceptable limits in other soils.

But exceeding tire load limits with too much ballast may result in equally rapid tire deterioration and premature failure. More careful matching of smaller implements to available power should keep slippage within acceptable limits without reducing field speed to the point of risking premature drive train failure.

Overballasting tractors may also raise some questions of legal liability. If the manufacturer recommends a maximum working weight based on the ROPS design for a particular tractor, who will be held legally responsible if that weight is knowingly exceeded by a dealer when the tractor is sold and the machine is ultimately involved in a serious accident causing ROPS failure? It would probably fall to the courts to determine responsibility. Failure of the buyer and seller to follow established limits could result in placement of blame on those individuals rather than on the manufacturer.

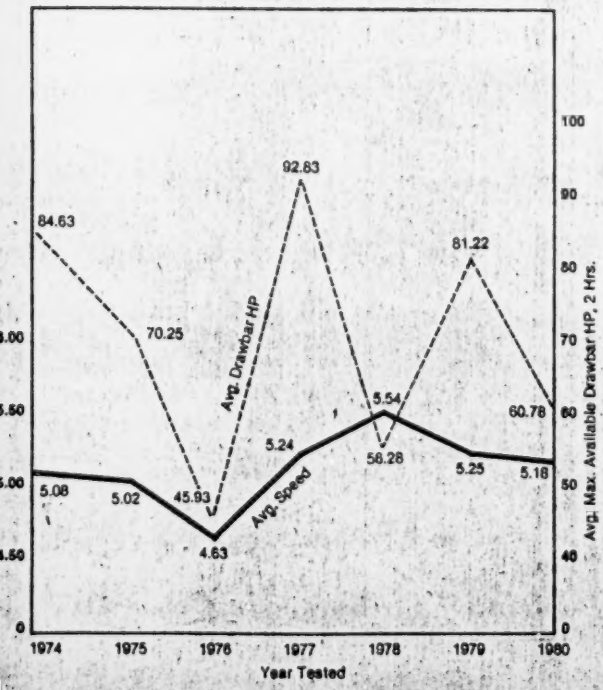
What's happening to tractor weight now?

An analysis was made of Nebraska Tractor Tests for current two-wheel-drive diesel tractors (I&T Red Book, Jan. 31, 1981) tested from 1974 through 1980. The few current models tested prior to 1974 and the limited number with gasoline engines were ignored. All four-wheel-drive tractors listed in the current Red Book were tested in 1976 or later and were evaluated in the same manner.

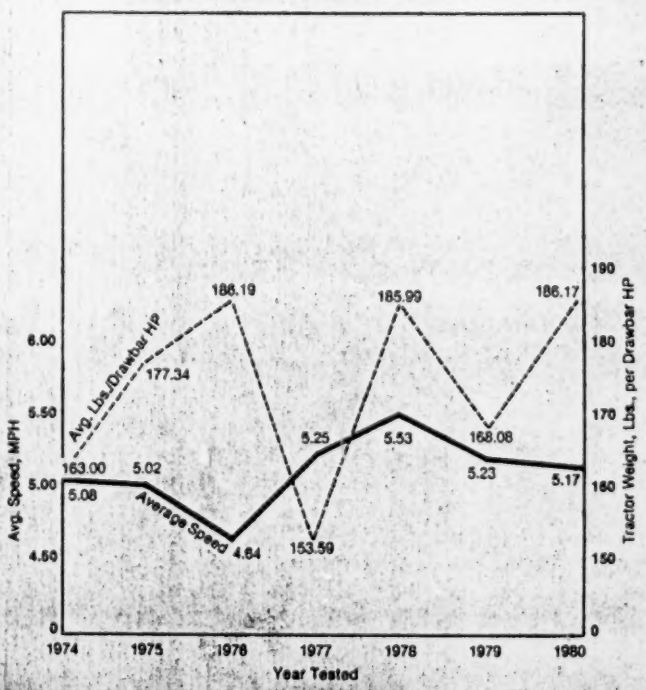
Many engineers compare tractors on the basis of pounds per pto horsepower, but the weight per drawbar horsepower was chosen here because we're looking at operating speed and weight, generally for draft loads, rather than pto performance. Also, because each manufacturer prepares his own tractors for testing and determines the amount of ballast (if any) to use, it is assumed they want those tractors to perform as well as possible and, therefore, equip them accordingly. In addition, the "Maximum Available Power—2 Hours" figure was used rather than plucking the highest drawbar horsepower at-

(*More...*)

3. Average Speed and Drawbar Power vs. Year Tested
(93 current 2WD diesel tractors)



4. Average Speed and Lbs. Drawbar HP vs. Year Tested
(93 current 2WD diesel tractors)



tained from any point on the test, as is done in some cases.

For both two- and four-wheel-drive tractors, average fuel consumption in horsepower-hours per gallon (hp-hrs/gal) roughly paralleled average maximum drawbar power as speed increased from about 3.5 to over 6.5 mph. For two-wheel drives, both average fuel efficiency and maximum power tended to *increase* as speed increased up to 5 and 5.49 mph, then *dropped* between 5.5 and 5.99 before again starting upward. Efficiency went from an average of 11.10 hp-hrs/gal for tractors developing maximum drawbar power below 4 mph, to 13.01 for speeds of 5 to 5.49 mph, fell to 12.14 for speeds of 5.5 to 5.99, then climbed back to 12.56 average hp-hrs/gal when speed exceeded 6.5 mph.

On the other hand, average weight (lbs.) per drawbar horsepower followed a directly opposite trend to maximum drawbar power. When average power increased, weight per horsepower declined and vice versa. Similar trends, though not as definite, were evident for four-wheel-drive tractors, too.

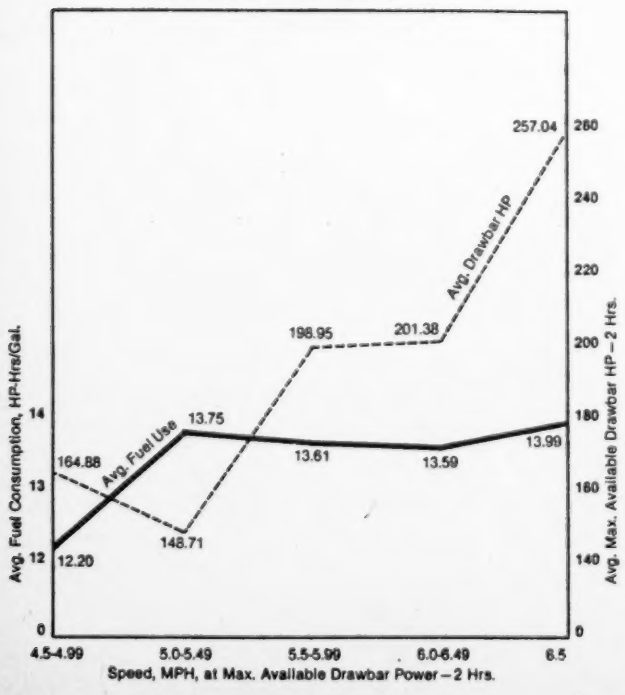
When two-wheel-drive tractors were compared by year of Nebraska Test, 1976 was found to be a slow year. Both average speed and average maximum drawbar power were lower than in any of the other years (1974-1980). A number of smaller tractors still current in 1981 were tested in 1976, and smaller tractors generally have developed maximum drawbar power at lower speeds compared with larger models. But, as with fuel efficiency and drawbar power, the average weight per drawbar horsepower for four-wheel-drives generally increased when power declined and fell when average annual power went up.

The average maximum drawbar power of both two- and four-wheel-drives peaked in 1978 at 92.38 and 237.12 hp, respectively. In that year, average weight per horsepower was lowest for two-wheel drives and highest for four-wheelers. But, the average weight per horsepower of four-wheel drives was within 3.6 pounds—between 146 and 149—in four of the five years studied. Only in 1977 was there a change—down to 135.64 lbs./db hp, the year average speed was highest.

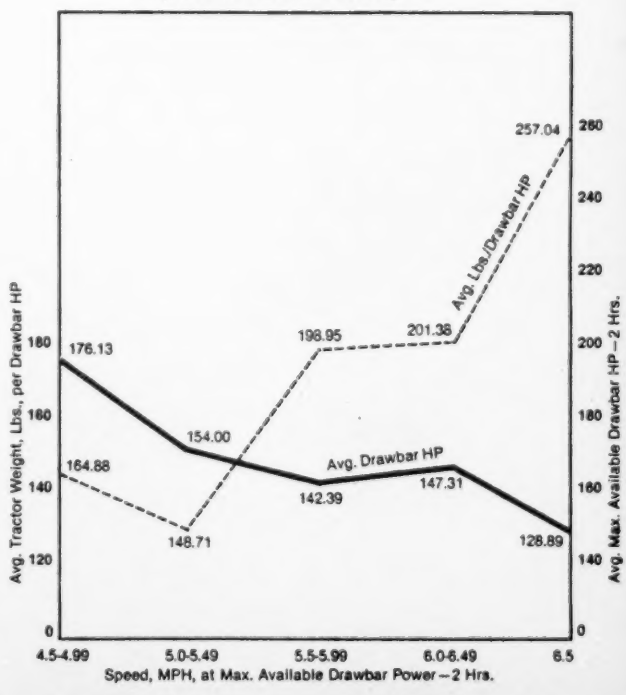
As indicated in the following chart, the weight per drawbar horsepower of two-wheel-drive tractors decreased steadily as power increased. Four-wheel-drives followed the same pattern except for a slightly lower average for tractors between 100 and 140 drawbar horsepower. However, only two

(More...)

5. Drawbar and Fuel Consumption vs. Speed (34 current 4WD tractors)



6. Avg. Drawbar Power & Lbs. Drawbar HP vs. Avg. Speed (34 current 4WD tractors)



current four-wheel-drives fell in this power class, so it is hardly enough to establish a trend.

The average weights were as follows:

Two-Wheel Drive Tractors

Avg. Drawbar Hp.	Avg. Lbs./Max Db Hp
40	203.35
40-60	181.76
60-80	168.82
80-100	159.39
100-120	148.74
120-140	143.92
140-160	135.42

Four-Wheel-Drive Tractors

Avg. Drawbar Hp	Avg. Lbs./Max Db Hp
100-140	150.67
140-180	166.67
180-220	144.55
220-260	132.22
260	123.23

Summing up

So, what does all this mean to farmers who are buying tractors to operate on soil—loose, firm, dry or wet—rather than on a concrete track?

Simply that most manufacturers are designing and building larger tractors to perform best at speeds of 5 mph or higher with tire slippage between 10 and 15 per cent.

In fact, the operator's manual for most big tractors carries a warning that steady operation with heavy loads requiring use of lower gears may be detrimental to drive train life.

It is uncertain whether manufacturers could or would refuse to honor warranty claims for tractors determined to have been seriously overloaded at low travel speeds. But, threats to that effect have been made by some company representatives.

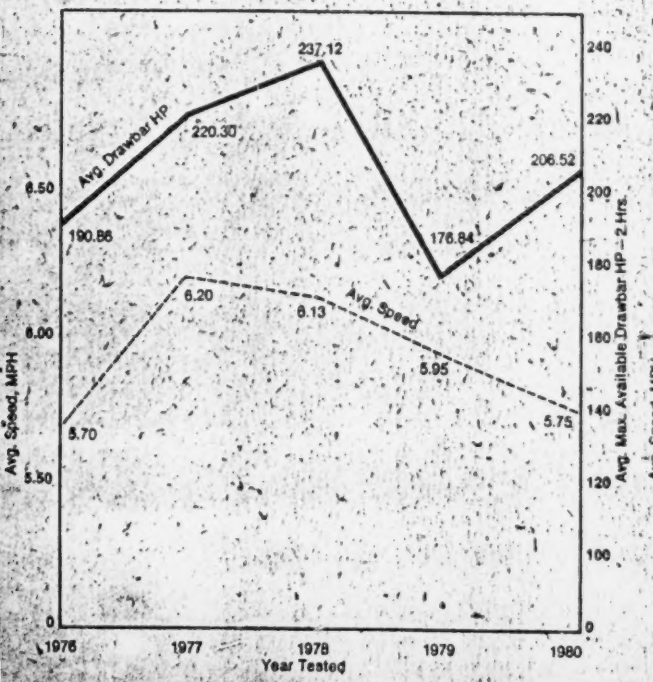
What can the question of speed versus load mean to a dealer?

Equipment sales for some, and nothing for others.

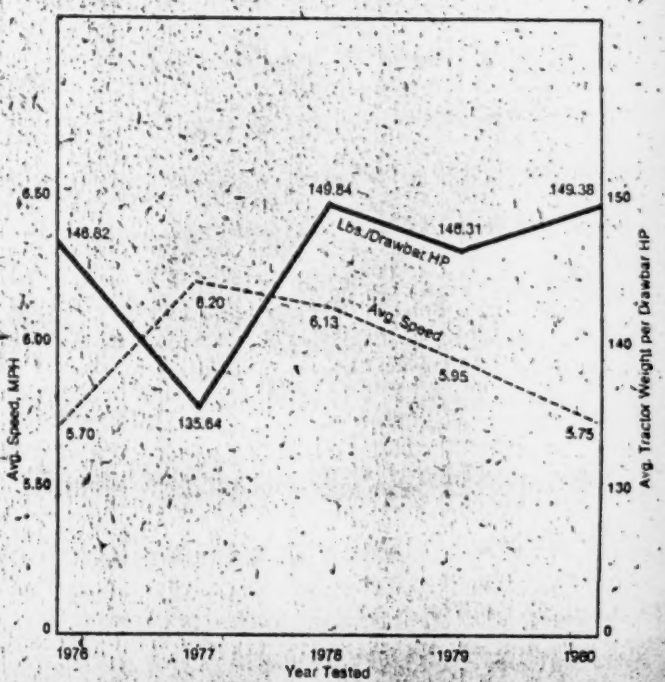
For example, in head-to-head bidding on six tractors for one customer, a dealer found himself outpriced by only $125 per tractor. Examination of the package by company representatives and discussions with the dealer who won the bid showed that the losing dealer had included four sets of rear wheel weights on each tractor—because the other dealer had included them in his bid. It was then pointed out to the losing dealer that his tractors, *without extra weights*, had essentially the same weight per horsepower as the other model with the added weight.

Moral of the story: It requires careful matching of tractors and implements to compete in today's cost-conscious market. Overweighting tractors or oversizing implements may tip sales to the competition. □

7. Average Speed & Drawbar Power vs. Year Tested (34 current 4WD tractors)



8. Average Speed & Lbs. Drawbar HP vs. Year Tested (34 current 4WD tractors)



AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

JONES FARM EQUIPMENT CO. Dothan, Alabama (April 14, 1981)

ALLIS-CHALMERS TRACTORS
7080 diesel, cab, (1977) (Excellent) 15,500
7045 diesel, cab, 1978 (Excellent) 15,000*
7040 diesel, cab, duals, 1976 (Good) 11,500*
7030 diesel, cab, 1974 (Fair) 5250*
XT190 diesel, 1971 (Good) 3800*
G, cult., 1950 (Good) 700

CASE TRACTORS
1370 diesel, 1973 (Fair) 6150
1070 diesel, 1974 (Good) 7600
1030 diesel, 1971 (Fair) 4200
680 diesel, ldr., backhoe, 1970 (Excellent) 14,500*
580B diesel, 1969 (Good) 5700
430, ldr., 1963 (Fair) 1700
311, 1958 (Fair) 675

DAVID BROWN TRACTORS
1210 diesel, 1971 (Good) 2400*
990 diesel, 1964 (Rough) 575*

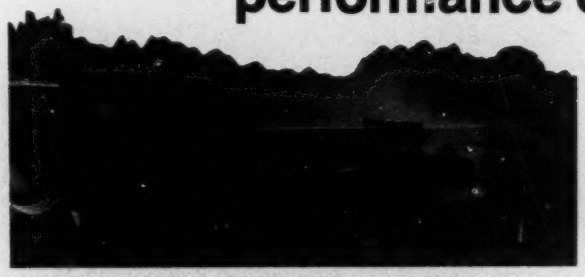
MASSEY-FERGUSON TRACTORS
1155 diesel, 1973 (Fair) 8000
1135 diesel, duals, 1975 (Fair) 6600*
1105 diesel, 1973 (Fair) 6100
1085 diesel, 1976 (Excellent) 7100
1100 diesel, 1972 (Fair) 3750
1080 diesel, 1971 (Good) 4600
1080 diesel, 1970 (Good) 4700*
285 diesel, 1975 (Excellent) 6900*
265 diesel, 1975 (Good) 5800*
245 diesel, 1976 (Excellent) 6500
235 diesel, 1975 (Good) 4000
230 diesel, 1976 (Good) 3000
202, forklift, 1962 (Fair) 1450
180 diesel, 1968 (Excellent) 3850
180 diesel, 1968 (Excellent) 3650
180 diesel, 1966 (Good) 3250*
180 diesel, 1966 (Rough) 2350
175 diesel, 1973 (Excellent) 4800
175 diesel, 1972 (Rough) 1900
165 diesel, 1973 (Excellent) 4350
165 diesel, 1967 (Good) 3450*
165 diesel, 1966 (Good) 3550*
165 diesel, 1966 (Fair) 2325
150 diesel, 1969 (Good) 3000
135 diesel, 1974 (Good) 2700
135 diesel, 1969 (Good) 2750
135 diesel, 1966 (Good) 3300
135, 1966 (Fair) 2600*
135 diesel, 1966 (Fair) 2700*
135 diesel, 1966 (Rough) 2300
130 diesel, 1966 (Fair) 1000
65 diesel, 1963 (Good) 2000
65, 1963 (Good) 1950
40, 1956 (Good) 1100
35 diesel, 1961 (Excellent) 2400
35, 1959 (Fair) 1300*
35 diesel, 1958 (Good) 1050*
35 diesel, 1958 (Good) 1250
TO30, 1952 (Good) 1300
TO30, 1952 (Good) 1000*
TO30, 1952 (Good) 1250

FORD-FERGUSON TRACTORS
9N, 1948 (Good) 975
9N, 1946 (Good) 1000
9N, 1946 (Good) 1000
9N, 1946 (Good) 950
9N, 1946 (Good) 1050

FORD TRACTORS
8600 diesel, 1975 (Fair) 5100*
8000 diesel, 1972 (Good) 4900
8000 diesel, 1972 (Good) 5350
8000 diesel, 1971 (Good) 4800
7000 diesel, 1974 (Good) 6400
5500 diesel, ldr., backhoe, (Rough) 2500
5000 diesel, 1972 (Excellent) 5225
5000 diesel, 1967 (Fair) 3400
4100 diesel, 1977 (Good) 4250
4100 diesel, 1976 (Good) 4500
4100 diesel, 1976 (Good) 5050
4000 diesel, 1972 (Excellent) 4800
4000 diesel, 1970 (Excellent) 4700*
4000 diesel, 1970 (Good) 3900
4000 diesel, 1970 (Good) 3800
4000 diesel, Select-O-Speed, 1967 (Rough) 1125
4000 diesel, 1963 (Fair) 1400
3000 diesel, 1974 (Excellent) 4700*
3000 diesel, 1973 (Fair) 2850
3000 diesel, 1972 (Good) 3650
3000 diesel, 1969 (Fair) 2600
2000 diesel, 1968 (Good) 2900
2000, Select-O-Speed, 1964 (Rough) 700
2000, 1963 (Excellent) 2800
861, 1960 (Good) 2000
850, 1957 (Excellent) 2250*
850, 1957 (Excellent) 2200
841 diesel, 1961 (Excellent) 2500
820, ldr., 1956 (Good) 1550
641, 1961 (Good) 1975
641, 1960 (Good) 1750
641, 1959 (Excellent) 2350
641, 1959 (Good) 2000
641, 1958 (Good) 2100*
641, 1958 (Good) 2000
641, 1958 (Fair) 1300
640, 1956 (Fair) 1450

(More...)

Midland's new generation of land forming equipment gives dependable performance day after day.



Midland 3010 / 3012 / 3014 Box Plane

The new Midland Box Plane incorporates two tools in one. Features include simplicity, precision and maneuverability. The rugged box scraper with its integral rockshaft and draw bar hitch can easily be detached from the frame and used on your tractor for terracing, drainage construction and other utility work.

The box plane is available in blade widths of 10, 12 and 14 feet. The rigid 31 foot frame and steel gauge wheels permit precision leveling with a 70 to 150 h.p. tractors.

Midland Tandem Scrapers

Midland farm scrapers load, carry, dump and spread with one hydraulic lever controlling all operations for each scraper. The scrapers feature all-welded construction, low blade angle for easier loading and the Midland Seal-Set hub. Sizes include 3½, 4½, 6 and 8-yard dolly and straight pole units. 11 and 14-yard push-off type scrapers are available in dolly models.

Midland manufactures the Big Power Line of Disk Harrows, Sub-Soilers, Chisel Plows, Scrapers, Box Scrapers and Land Levelers as well as Pasture Dreams, Zip Seeders, Northcote Precision Drills and Gopher Killers.

Midland Manufacturing Company
Division of Northcote Corporation
Electric Mills, Mississippi 39329 / (601) 476-8401
Telex: 504-156 / Answer Back MMCO ELML

FEMA

Circle (14) on Reply Card

Auctions
(continued)

640, 1956 (Good) 1800*
640, 1955 (Good) 1900
640, 1955 (Good) 1800
Major diesel, 1955 (Good) 850
Dexta, 1959 (Good) 1300
Jub., 1953 (Excellent) 1750
8N, 1952 (Excellent) 1550
8N, 1951 (Excellent) 1500
8N, 1951 (Excellent) 1450
8N, 1951 (Excellent) 1500
8N, 1951 (Good) 1350
8N, 1951 (Good) 1300
8N, 1951 (Good) 1400*
8N, 1948 (Fair) 950
8N, 1948 (Good) 1150
8N, 1948 (Good) 900
8N, 1948 (Fair) 850
8N, 1948 (Good) 1160

INTERNATIONAL HARVESTER TRACTORS

1466 diesel, 1973 (Fair) 6500*
706 diesel, 1964 (Fair) 2800*
706, 1964 (Rough) 2200*
660 diesel, 1961 (Fair) 825
574 diesel, 1973 (Good) 3450*
504 diesel, 1966 (Rough) 1300
B450 diesel, 1957 (Fair) 525*
2444 diesel, 1968 (Good) 2700*
404, 1962 (Rough) 350
H, 1944 (Rough) 125
C, 1948 (Good) 450
Sup. A, 1950 (Good) 925
A, 1940 (Fair) 350
Cub, cult., plt., 1952 (Excellent) 1600
Cub, cult., plt., plow 1952 (Excellent) 1800

JOHN DEERE TRACTORS

4520 diesel, cab, 1969 (Good) 8100
4430 diesel, cab, 1973 (Good) 10,200*
3020 diesel, 1968 (Good) 4300
3010, 1961 (Fair) 2700*
3010, 1961 (Rough) 2000
2630 diesel, 1975 (Excellent) 6100*
2630 diesel, 1975 (Excellent) 6100
2520 diesel, 1970 (Excellent) 6300*
2040 diesel, 1976 (Excellent) 6500
2020 diesel, 1968 (Good) 3900*
2020 diesel, 1968 (Good) 4150
2020 diesel, 1966 (Rough) 1175
2010 diesel, ldr., backhoe, 1964 (Good) 3000
1020, 1966 (Fair) 2550
1010, 1962 (Fair) 1325
830 diesel, 1970 (Good) 4400*
430, 1959 (Good) 1300*
420, 1957 (Good) 1375
60, 1954 (Fair) 450*
40, 1953 (Good) 875*
40, 1953 (Good) 900

LEYLAND TRACTORS

384 diesel, 1970 (Good) 1700

LONG TRACTORS

900 diesel, (Good) 3750
460 diesel, 1976 (Good) 3500*
360 diesel, 1977 (Excellent) 5000*
350 diesel, (Good) 2000

OLIVER TRACTORS

1900 diesel, 1963 (Fair) 2000
1755 diesel, 1972 (Good) 4200*
1650 diesel, 1967 (Fair) 1825

TULLBELT TRACTOR

Cult., plt., mo., (Good) 1900

YODER & FREY, INC.
Archbold, Ohio
(April 13 & 14, 1981)

ALLIS-CHALMERS TRACTORS

7045 diesel, duals, (Good) 15,250
7040 diesel, 1974 (Fair) 11,500*
7040 diesel, 1974 (Fair) 11,000*
7030 diesel, 1972 (Good) 8350*
7030 diesel, 1971 (Fair) 8800*
XT190 diesel, ... 5800
XT190 diesel, 1985 (Fair) 2935
185 diesel, 1969 (Fair) 7850*
170, 1977 (Good) 5150*
D19 diesel, 1965 (Fair) 2450
D17, ldr., 1963 (Good) 2300
D17, 1961 (Fair) 1750
D17, 1963 (Good) 1425*
CA, plow, cult., 1948 (Fair) 1075
B, mo., 1950 (Fair) 570

DAVID BROWN TRACTORS

1200 diesel, 1965 (Fair) 2475
1200 diesel, 1963 (Fair) 2150
990, 1964 (Fair) 3000*
880, ldr., 1966 (Fair) 2750

DEUTZ TRACTORS

90-06, (Rough) 3025
60-06, (Rough) 1775

CASE TRACTORS

1370 diesel, 1975 (Fair) 10,800
1175, ... 4975
1030 diesel, ... 6100
1030 diesel, 1966 (Good) 3900*
930, 1967 (Rough) 1975
930 diesel, 1962 (Fair) 3950
930, 1961 (Rough) 1500
730, 1967 (Good) 2500
700 diesel, 1957 (Fair) 1225
530 diesel, ... 2225
430 diesel, 1963 (Fair) 2025*

JOHN DEERE TRACTORS

8630 diesel, 1979 (Good) 33,000*
6030 diesel, 1972 (Fair) 17,500*
6030 diesel, duals, 1972 (Fair) 15,300*
5020 diesel, 1971 (Good) 9000
4630 diesel, 1974 (Good) 15,700
4630 diesel, 1973 (Fair) 10,500*
4620 diesel, 1971 (Fair) 9250*
4440 diesel, (New) 30,700
4430 diesel, 1975 (Good) 18,300*
4430 diesel, 1972 (Rough) 13,100
4030 diesel, 1978 (Good) 10,250
4030 LP, 1967 (Fair) 3450*
4020 diesel, 1971 (Good) 9500
4020 diesel, 1970 (Fair) 8100*
4020 diesel, 1970 (Good) 7450
4020 diesel, 1965 (Rough) 5750
4000 diesel, 1970 (Good) 8000*
4010 diesel, 1963 (Good) 4600
4010 diesel, 1963 (Good) 5200*
4010 diesel, 1962 (Fair) 4800
3020 diesel, 1967 (Fair) 5050
3020 diesel, 1967 (Good) 5000
3020 diesel, 1966 (Fair) 4900
3020 diesel, 1966 (Fair) 4250
3010 diesel, 1963 (Fair) 3900*
3010, 1963 (Fair) 2700
3010, 1961 (Good) 3775
2510 diesel, 1971 (Good) 5000
2510, 1970 (Fair) 3425*
2510, 1967 (Fair) 3150
2130 diesel, 1975 (Good) 5700*
2010, 1964 (Fair) 2500*
2010, 1963 (Fair) 2150
830 diesel, 1959 (Fair) 1900*
820 diesel, 1957 (Fair) 2000*
730 diesel, 1958 (Good) 3450
720 diesel, 1957 (Fair) 1875
720 diesel, 1957 (Fair) 1850

(More...)

CHAMPION WEIGHT LIFTERS.

A full line of winches from America's leading manufacturer.
For general farm and utility work:
• Portable conveyors, elevators, grain augers • Grain bin jacks • Bale loaders • Truck davits • Poultry equipment.

NEW WORM GEAR WINCHES
- 6 models: 1500 and 2000 lb. capacities
- Bronze bushings for long life
- Self locking for positive control

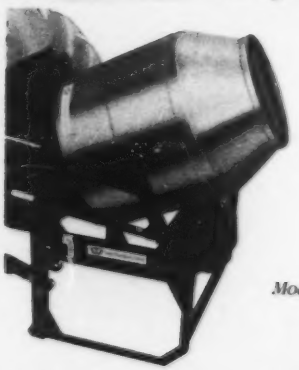
HAND WINCHES
New KX Series
- 5 models: 1000-4000 lb. capacities
- Automatic braking
- Gear covers and two independent ratchets

We also offer a complete line of electric winches up to 5000 lb. capacity. Write or call for catalog and prices.

FULTON
FULTON MANUFACTURING CORP.
P.O. Box 19903 • Milwaukee, WI 53219
Phone: (414) 321-4810

Circle (16) on Reply Card

An 8 cu. ft. cement mixer that hitches to your tractor



Model 800

Now that's a Worksaver!

Our big 1½ sack Model 800 mixer goes anywhere your tractor can—places big mixers can't. Stop paying for expensive ready-mix, and get a Worksaver that's just your size.

The Model 800 hooks up easily to a 3-point hitch with no brackets needed. The drum rotates continuously, and four big paddles mix as you go. You can even adjust the drum angle for extra control during loading and dumping.

Worksaver designed the Model 800 to save you time and money. We think farmers deserve more of both.

WORKSAVER, INC.
P.O. Box 1000, Litchfield, Illinois 62056
Telephone (217) 324-5973

Circle (17) on Reply Card

Auctions *(continued)*

720, ... 1850
630, 1956 (Good) 2500
620, 1959 (Good) 1800*
70, 1956 (Fair) 1175
70, 1955 (Good) 1675
60, 1954 (Fair) 900
60, 1954 (Fair) 875*
R, 1949 (Fair) 1000*
530, 1957 (Fair) 1450*
520, 1956 (Fair) 1525
520, 1956 (Rough) 1950
430, 1959 (Fair) 2250
40, cult., 1954 (Fair) 1575
MT, cult., 1950 (Fair) 950

FORD TRACTORS

9600 diesel, 1977 (Good) 10,000
9600, duals, 1976 (Good) 11,200
8000 diesel, 1973 (Rough) 5100*
8000, duals, 1969 (Fair) 5500
6000, 1963 (Fair) 2150
6000, 1961 (Fair) 1450
5000, 1971 (Good) 4700
5000 diesel, 1970 (Fair) 3950
4600, 1980 (Good) 7300*
4000, ... 3850
4000, 1960 (Good) 2100
3600, 1980 (New) 7700*
3000 diesel, 1972 (Good) 4100
3000, 1971 (Good) 3575
2000, 1963 (Fair) 1475
960, 1954 (Fair) 1500
960, 1954 (Fair) 1250
971, 1957 (Fair) 1410
901, Select-O-Speed, 1957 (Good) 1500
900, 1954 (Fair) 1330
801, ldr., 1954 (Fair) 1925
800, 1954 (Fair) 1675
600, 1962 (Fair) 1700
Jub., ldr., 1953 (Fair) 2520
Jub., ldr., 1953 (Fair) 2100
Jub., ldr., 1953 (Rough) 1500
Maj., ldr., 1956 (Rough) 1450
Maj., (Rough) 825
8N, ldr., 1951 (Good) 2160
8N, 1951 (Good) 1400
8N, ldr., 1950 (Fair) 1800
8N, ... 1050
8N, ... 900
9N, 1945 (Good) 1500
8N, mo., 1944 (Fair) 1275

INTERNATIONAL HARVESTER TRACTORS

1468 diesel, 1973 (Good) 10,000
1468 diesel, 1970 (Good) 8150
1206 diesel, 1967 (Good) 6350*
1206 diesel, 1967 (Fair) 5400*
1086 diesel, 1979 (Excellent) 18,900*
1086 diesel, 1978 (Good) 15,500*
1086 diesel 1977 (Good) 16,000
1066, hydro, ... 10,300
1066 diesel, 1972 (Fair) 9900*
1066 diesel, 1972 (Good) 9050
2500, ldr., ... 3150
966 diesel, 1973 (Good) 10,750
956, duals, ... 9600
966 diesel, 1971 (Good) 8700
856 diesel, 1971 (Fair) 7700
826, 1968 (Fair) 5350
806 diesel, 1965 (Fair) 6075
806 diesel, 1965 (Fair) 4800*
806, 1964 (Rough) 3600
766 diesel, 1973 (Fair) 8000*
706 diesel, 1967 (Fair) 3900
706, (Fair) 3000
656, 1967 (Fair) 3700
656, ldr., 1970 (Rough) 3700
560 diesel, 1962 (Fair) 2000
560, 1962 (Fair) 1750
560, 1961 (Fair) 1725
544, ldr., ... 4400
460 diesel, 1960 (Fair) 1225
450 diesel, 1957 (Fair) 1175
450, 1957 (Fair) 1150
434, ldr., ... 3000
400, 1956 (Fair) 1350
400, 1955 (Good) 1200
350, ldr., 1958 (Fair) 975
340, 1963 (Fair) 1850
300, ... 975
154, mo., bld., ... 3375
154, mo., bld. 2600
100, cult., 1954 (Fair) 2450
Sup. M, 1953 (Fair) 1210
Sup. M, 1952 (Fair) 1100
Sup. M, 1951 (Fair) 1100
M, ... 800
H, ldr., 1948 (Rough) 675
Sup. A, cult., 1951 (Good) 1700
A, cult., 1950 (Good) 1375
Cub, 1950 (Fair) 1450
Cub, mo., 1949 (Fair) 900
Cub, ... 820

MASSEY-FERGUSON TRACTORS

2675 diesel, 1978 (Excellent) 15,200*
1155 diesel, 1972 (Good) 8800
1135 diesel, 1976 (Fair) 9750
1100, 1970 (Fair) 3200
1100, 1966 (Fair) 3300*
1080 diesel, 1970 (Fair) 6100
356, ldr., ... 2400
230, (New) 7000*
180, 1969 (Fair) 3650*
165 diesel, 1970 (Fair) 3325*
90, 1957 (Fair) 1225
85 diesel, 1958 (Fair) 1600
65, ldr., ... 2150
65 diesel, ... 2050
50, 1962 (Fair) 1800
35, 1952 (Fair) 1550

MINNEAPOLIS-MOLINE TRACTORS

G1000 diesel, 1965 (Fair) 2550
670, 1959 (Fair) 2800

OLIVER TRACTORS

1950 diesel, turbo, 1968 (Good) 5200
1950 diesel turbo, 1967 (Fair) 3500
1850, 1964 (Fair) 3100*
1850, 1963 (Fair) 3500
1850, 1967 (Fair) 3100
1800, 1964 (Fair) 3350
1800 diesel, 1962 (Fair) 3200
1800, 1962 (Fair) 2750*
1800, 1961 (Rough) 2500*
1800 diesel, 1961 (Fair) 2325*
1755 diesel, 1969 (Good) 6425
1600, 1962 (Fair) 2575
1600, 1962 (Rough) 2250
77, 1947 (Fair) 585
55 Sup., 1957 (Fair) 1675

WHITE TRACTOR

4-150 diesel, duals, 1973 (Fair) 12,900

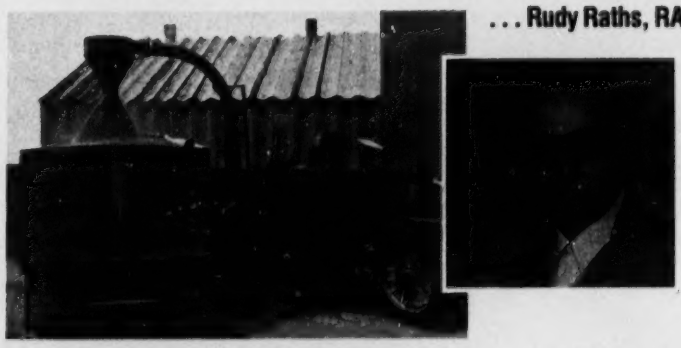
VERSATILE TRACTOR

750 diesel, 1978 (Good) 31,000*

NEUERO

"NEUERO is the best line we've handled in 14 years and gives us the least amount of trouble,"

. . . Rudy Raths, RATHS EQUIPMENT Herman, Minn.



Neuero is the world's oldest and largest manufacturer of portable pneumatic grain conveyors. There are over a dozen models to sell . . . both PTO and self-powered . . . to fit any job.

"If it wasn't for our NEUERO business, our income would have been a lot less," says Rudy Raths. He continued, "There's a Dealer in northern Minnesota who said if it wasn't for acquiring the NEUERO line over a year ago, he couldn't have made it through last summer, since the drouth hit him so hard."

Why NEUERO? "The profits from NEUERO sales are good for us, and the equipment is good for our customers. We have very little service work after the sale. The NEUERO people treat us right and that's important to us. I'd recommend a NEUERO Dealership to anyone. It's a good way to make money and to help your customers reduce their costs and save labor too," added Raths.

NEUERO CORPORATION
1201 Hawthorne Lane,
West Chicago, Ill. 60185
PHONE: (312) 231-9020

You should be a NEUERO Dealer too! Write or phone for information on the growing profit opportunities available to you. Do it today!

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